Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for improving charge/discharge cycle characteristics of a lithium secondary battery using a Si based anode active material, comprising

surface-treating an anode current collector such that [[the]] a surface morphology of the anode current collector has grain boundaries of 5 to 100 μm size throughout [[the]]an entire surface of the anode current collector, and trenches having a depth of more than 1 μm formed at grain boundary junctions,

wherein the surface-treating is performed by chemical or electrical etching using a wet method, or by reactive gas or ion etching using a dry method.

2. (Cancelled)

3. (Currently Amended) The method as set forth in ~~claim 2~~claim 1, wherein for performing chemical etching, when Cu or Ni is used as the anode current collector, a mixture of $FeCl_3/HCl/H_2O$ is utilized as an etchant.

4. (Original) The method as set forth in claim 1, wherein upon vapor-depositing the silicon film, as the anode active material, on the surface-treated anode current collector by sputtering, bias voltage is applied to the anode current collector to further improve bondability between the silicon film and anode current collector.

5. (Original) The method as set forth in claim 1, wherein after formation of an adhesive layer on the surface-treated anode current collector, the silicon film, as the anode active material is vapor-deposited thereon.

6. (Original) The method as set forth in claim 5, wherein the adhesive layer is a zirconium thin film, when Cu or Ni is used as the anode current collector.

7. (Original) The method as set forth in claim 1, wherein after formation of the adhesive layer on the surface-treated anode current collector, the silicon film, as the anode active material, is vapor-deposited on the adhesive film by sputtering, under application of bias voltage to the anode current collector.

8. (Previously Presented) The method as set forth in claim 5, wherein heat treatment is performed to further enhance bondability between the anode current collector and adhesive layer, after formation of the adhesive layer on the anode current collector.

9. (Original) The method as set forth in claim 8, wherein heat treatment is performed at a temperature of 100 to 400°C for 10 sec to 30 min.

10. (Withdrawn) A lithium secondary battery comprising an anode treated or fabricated by the method of Claim 1, a cathode, a separator and a non-aqueous electrolyte containing a lithium salt.

11. (Previously Presented) The method as set forth in claim 7, wherein heat treatment is performed to further enhance bondability between the anode current collector and adhesive layer, after formation of the adhesive layer on the anode current collector.